

Patent Claims:

1. Electrohydraulic brake system for motor vehicles of the 'brake-by-wire' type including a hydraulic pressure source that can be actuated by means of an electronic control unit and is comprised of a hydraulic pump driven by an electric motor and a high-pressure accumulator adapted to be recharged by the pump,  
characterized in that a means is provided monitoring the hydraulic delivery rate of the pump for the purpose of detection of quantities of gas or air at the suction side of the pump.
2. Electrohydraulic brake system as claimed in claim 1, characterized in that the hydraulic delivery rate is monitored by determining the electromotive force of the electric motor driving the hydraulic pump.
3. Electrohydraulic brake system as claimed in claim 1, characterized in that the hydraulic delivery rate is monitored by determining the electric power consumption of the electric motor driving the hydraulic pump.
4. Electrohydraulic brake system as claimed in claim 1, characterized in that the hydraulic delivery rate is monitored by determining the rotational speed of the electric motor driving the hydraulic pump.

5. Electrohydraulic brake system as claimed in claim 4, characterized in that the rotational speed is determined from the electromotive force of the electric motor driving the pump.
6. Electrohydraulic brake system as claimed in any one of claims 1 to 5, characterized in that the actuating frequency of the electric motor preferably amounts to 25 hertz.
7. Electrohydraulic brake system as claimed in any one of claims 1 to 6, characterized in that the time constant of the low-pass filter preferably amounts to 4 msec.
8. Method of monitoring an electrohydraulic brake system for motor vehicles of the 'brake-by-wire' type including a hydraulic pressure source that can be actuated by means of an electronic control unit and is comprised of a hydraulic pump driven by an electric motor and a high-pressure accumulator adapted to be recharged by the pump, characterized in that quantities of gas or air at the suction side of the pump are detected by determining the hydraulic delivery rate of the pump.
9. Method as claimed in claim 8, characterized in that the hydraulic delivery rate is determined by analyzing the electromotive force of the electric motor driving the pump.

10. Method as claimed in claim 8,  
characterized in that the hydraulic delivery  
rate is determined by analyzing the electric power  
consumption of the electric motor driving the pump.
11. Method as claimed in claim 8,  
characterized in that the hydraulic delivery  
rate is determined by analyzing the rotational speed of  
the electric motor driving the pump.
12. Method as claimed in claim 8,  
characterized in that the rotational speed  
of the electric motor driving the pump is determined from  
the electromotive force of the electric motor.
13. Method as claimed in any one of claims 8 to 12,  
characterized in that the actuating  
frequency of the electric motor preferably amounts to 25  
hertz.
14. Method as claimed in any one of claims 8 to 13,  
characterized in that the time constant of  
the low-pass filter preferably amounts to 4 msec.